What Is Claimed Is

1. A method for increasing carbon flow into a metabolic pathway of a host cell capable of utilizing a phosphotransferase transport system for carbohydrate transport, the method comprising increasing PEP availability to the metabolic pathway by selecting a host cell which is phenotypically $Pts^-/glucose^+$, and culturing the host cell with an appropriate carbon source.

2. A method of Claim 1 wherein the selected host cell is modified to delete all or substantially all of one or more gene(s) selected from the group consisting of *ptsI, ptsH* and *crr*.

3. A method of Claim 1 further comprising transforming the host cell with recombinant DNA coding for transketolase so that transketolase is expressed at enhanced levels relative to wild-type host cells.

4. A method of Claim 1 further comprising transforming the host cell with recombinant DNA coding for transaldolase so that transaldolase is expressed at enhanced levels relative to wild-type host cells.

5. A method of Claim 1 further comprising transforming the host cell with recombinant DNA coding for phosphoenolpyruvate synthase so that phosphoenolpyruvate synthase is expressed at enhanced levels relative to wild-type host cells.

6. A method of Claim 1 further comprising mutating the host cell to reduce or eliminate pyruvate kinase activity.

7. A method of Claim 6 wherein pyruvate kinase activity is reduced or eliminated in the host cell by introducing a mutation in one or more of the DNA encoding pyruvate kinase, or in the promoter or other regulatory DNA controlling the expression of pyruvate kinase.

8. A method for increasing carbon flow into a metabolic pathway of a host cell capable of utilizing a phosphotransferase transport system for carbohydrate transport, the method comprising:

   a) selecting a host cell which is phenotypically $Pts^-/glucose^+$;

b) modifying the host cell of step a) to enhance the expression of one or more enzyme(s) selected from the group consisting of transketolase, transaldolase and phosphoenolpyruvate synthase; and

c) culturing the host cell with an appropriate carbon source.

9. A method of Claim 1 further comprising the step of transferring into the host DNA coding for one or more enzyme(s) catalyzing reactions in the common aromatic pathway of the host cell.

10. A method of Claim 9 wherein the DNA encodes one or more enzyme(s) selected from the group consisting of DAHP synthase (*aroF, aroG, aroH*), DHQ synthase (*aroB*), DHQ dehydratase (*aroD*), shikimate dehydrogenase (*aroE*), shikimate kinase (*aroL, aroK*), EPSP synthase (*aroA*) and chorismate synthase (*aroC*).

11. A method of Claim 8 further comprising the step of transferring into the host DNA coding for one or more enzyme(s) catalyzing reactions in the common aromatic pathway of the host cell.

12. A method of Claim 8 wherein the DNA encodes one or more enzyme(s) selected from the group consisting of DAHP synthase (*aroF, aroG, aroH*), DHQ synthase (*aroB*), DHQ dehydratase (*aroD*), shikimate dehydrogenase (*aroE*), shikimate kinase (*aroL, aroK*), EPSP synthase (*aroA*) and chorismate synthase (*aroC*).

13. A method for enhancing a host cell's biosynthetic production of a desired compound derived from an aromatic pathway of said host cell, the method comprising:

a) utilizing a selected phenotypically $Pts^-/glucose^+$ host cell;

b) transforming into said host cell DNA coding for one or more enzyme(s) catalyzing reactions in the aromatic pathway of the host cell;

c) culturing the host cell with an appropriate carbon source; and

d) producing the desired compound.

14. A method of Claim 13 wherein the selected phenotypically $Pts^-/glucose^+$ host cell is prepared by modifying a precursor host cell to delete all or substantially all of one or more gene(s) selected from the group consisting of *ptsI, ptsH* and *crr*.

15. A method of Claim 13 wherein the DNA encodes one or more enzymes(s) selected from the group consisting of DAHP synthase (*aroF, aroG, aroH*), DHQ synthase (*aroB*), DHQ dehydratase (*aroD*), shikimate dehydrogenase (*aroE*), shikimate kinase (*aroL, aroK*), EPSP synthase (*aroA*) and chorismate synthase (*aroC*).

16. A method of Claim 13 further comprising transforming the host cell with recombinant DNA coding for one or more enzyme(s) selected from the group consisting of transketolase, transaldolase and phosphoenolpyruvate synthase so that said enzyme is expressed at enhanced levels relative to wild-type host cells.

17. A method for obtaining $Pts^-/glucose^+$ mutant cells, the method comprising:
    a) selecting a host cell which utilizes a phosphotransferase transport system;
    b) mutating the host cell by inactivating the phosphotransferase transport system by deleting or inactivating selected genes;
    c) culturing the mutant host cell using glucose as a carbon source; and
    d) selecting for mutant cells which grow on glucose having a specific growth rate of at least about 0.4 h^{-1}.

18. A method of Claim 17 wherein the phosphotransferase transport system is inactivated by deleting/inactivating one or more gene(s) selected from the group consisting of the *ptsI, ptsH* and *crr* genes.

19. A method of Claim 17 wherein the mutant cells are selected in a continuous culture.

20. A method of Claim 13 wherein the desired compound is selected from the group consisting of tryptophan, tyrosine and phenylalanine.

21. A method of Claim 20 wherein the desired compound is tryptophan and the $Pts^-/glucose^+$ host cell is transformed with DNA coding for one or more gene(s) selected from the group consisting of *aroG, aroA, aroC, aroB, aroL, aroE, trpE, trpD, trpC, trpB, trpA* and *tktA* or *tktB*.

22. A method of Claim 1 further comprising enhancing the expression of an enzyme selected from the group consisting of transketolase, transaldolase and phosphoenolpyruvate synthase in the host cell relative to expression of said enzyme(s) in wild-type host cells, the enhanced expression of said enzymes

resulting from introduction of one or more mutation(s) in the DNA coding for said enzyme, or in promoter or regulatory DNA controlling the expression of gene(s) encoding said enzymes.